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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No. Q57577

Baik-Hee HAN

Appln. No. 09/487,729

Group Art Unit: 2614

Confirmation No. 3502

Examiner: NATNAEL, PAULO M.

Filed: January 19, 2000

For: AUTOMATIC CHANNEL MEMORY DEVICE

SUBMISSION OF APPELLANT'S BRIEF ON APPEAL

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Technology Center 2600

Sir:

Submitted herewith please find an original and two copies of Appellant's Brief on Appeal: A check for the statutory fee of \$330.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

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Date: February 11, 2004

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APPELLANT'S BRIEF ON APPEAL UNDER 37 C.F.R. § 1.192

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Sir:

In accordance with the provisions of 37 C.F.R. § 1.192, Appellant submits the following, which comprises the Appellant's Brief on Appeal from the Advisory Action dated November 17, 2003, wherein claims 1, 3-5 and 7-8 remain finally rejected. This Appeal Brief is being filed in triplicate and is accompanied by a Submission which includes the required appeal fee set forth in 37 C.F.R. § 1.17(c). Appellant's Notice of Appeal was filed on December 16, 2003. Therefore, the present Appeal Brief is timely filed.

I. REAL PARTY IN INTEREST

The real party in interest is SAMSUNG ELECTRONICS CO., LTD. (Assignee) by virtue of an assignment executed by the inventor (Appellant), on February 15, 2000, and recorded by

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the Assignment Branch of the U.S. Patent and Trademark Office on May 25, 2000 (at Reel 010815, Frame 0864).

II. RELATED APPEALS AND INTERFERENCES

Appellant states that, upon information and belief, Appellant is not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

The present application was filed on January 19, 2000 with claims 1-4. Claims 5-8 were added to the application in an Amendment Under 37 C.F.R. § 1.111 filed on May 5, 2003.

In the final Office Action dated July 16, 2003, from which Appellant appeals, claims 1-8 were rejected. In response to the final Office Action of July 16, 2003, Appellant filed an Amendment Under 37 C.F.R. § 1.116, wherein claims 2 and 6 were canceled.

Thus, claims 1, 3-5 and 7-8, which are listed in the attached Appendix, are currently pending in the application and are the claims on appeal from the final rejections as set forth in the final Office Action of July 16, 2003 (*see also* the Advisory Action dated November 17, 2003).

IV. STATUS OF AMENDMENTS

As noted above, Appellant filed an Amendment Under 37 C.F.R. § 1.116 on October 16, 2003 in response to the final Office Action dated July 16, 2003. In this Amendment, the subject matter of claims 2 and 6 was incorporated into independent claims 1 and 5, respectively. Furthermore, claims 2 and 6 were canceled to avoid redundancy. According to the Advisory

Action dated November 17, 2003, these claim amendments will be entered for purposes of appeal.

No other after-final amendments were filed subsequent to final rejection.

V. SUMMARY OF THE INVENTION

The present invention relates to an automatic channel memory device for automatically memorizing a tuned channel if a broadcasting signal is present in the tuned channel (Appellant's page 1, lines 4-8).

In a first conventional channel memorization technique, a user must first select (*i.e.*, tune to) a desired channel (*e.g.*, using a remote control device) and then press a special channel memory button 10 to memorize the tuned channel (Appellant's page 1, lines 10-13; and Prior Art Fig. 1).

This first conventional technique requires a user to perform two actions for each and every channel that is to be memorized, *i.e.*, the user must both tune to the channel and then separately indicate that the channel is to be memorized. Furthermore, this technique requires that a special dedicated button be provided (*e.g.*, on the remote control device) for indicating a user's desire to memorize a tuned channel. The inclusion of an additional dedicated button increases both the complexity and the cost of the remote controller. Further still, since this technique does not check whether a broadcasting signal is present in the tuned channel, it is possible for a user to inadvertently memorize a channel on which nothing is being broadcast.

In a second conventional channel memorization technique, a menu setting key 12 is used to access a menu screen (*e.g.*, an auto-programming menu screen) in order to initiate/set

scanning of all channels, wherein the channels having a broadcasting signal are automatically memorized (Appellant's page 1, lines 13-15; and Prior Art Fig. 1).

This second conventional technique requires a user to access and set a specific menu function in order to memorize channels, which is inconvenient in practical use. Furthermore, this technique requires that a dedicated menu be provided for indicating a user's desire to initiate/set channel memorization. Further still, this technique requires that all channels are processed to memorize any channels, as opposed to memorizing channels on a channel-by-channel basis.

In view of the above exemplary problems of the conventional channel memorization techniques, the claimed invention provides an automatic channel memory device (*see, e.g.*, claims 1 and 5) for determining whether a signal is present in a tuned channel, when a channel is tuned, and for automatically memorizing the channel number if a signal is present in the tuned channel (Appellant's page 1, lines 21-24).

An exemplary embodiment of the present invention includes a key input 200, a tuner 202, a signal processor 204, a memory 206, a character signal generator 208, a mixer 210, a display 212 and a controller 214 (Appellant's Fig. 2).

The key input 200 includes a remote controller having digit buttons (Appellant's Fig. 3). Unlike the remote controller used in the aforementioned conventional techniques, in the present invention, a dedicated memory and/or menu button is not needed (*c.f.*, Prior Art Fig. 1 and Appellant's Fig. 3). The key input 200 is used for inputting a channel number according to a user's selection (Appellant's claims 1 and 5).

The controller 214 receives the channel number output from the key input 200 and controls the tuner 202 to tune to a broadcasting channel corresponding to the received channel number (Appellant's claims 1 and 5). The signal processor 204 processes a composite video signal tuned and output from the tuner 202.

In particular, the controller 214 receives the signal output from the signal processor 204, determines whether or not a broadcasting signal is present in the currently tuned broadcasting channel and stores the corresponding broadcasting channel number in the memory 206 only when a broadcasting signal is present (Appellant's page 3, lines 19-23; and claims 1 and 5).

Additionally, the controller 214 can control the character signal generator 208 to generate a channel number for the channel which is currently being broadcast 40 and a character string 42 (e.g., "memory") so that a user can easily identify the memorization of a tuned broadcasting channel (Appellant's page 3, lines 23-27; and Fig. 4).

Thus, unlike the aforementioned conventional techniques, according to the present invention, the mere act of tuning to a channel, in which a broadcasting signal is present, automatically results in the memorization of the tuned channel number. Additionally, a user wanting to memorize a channel is not inconvenienced by additional buttons, operations, menus, etc. Furthermore, only those channels that a user actually tunes to are memorized. Therefore, a user is not forced to wait for the processing of each and every channel, which can take a considerable amount of time for a large number of channels. Further still, the user is not forced to go back and manually delete channels that were memorized during an auto-programming menu function, but in which the user has no interest.

VI. ISSUES

The issues on appeal are:

1. Whether or not claims 1 and 5 are anticipated by Tsukagoshi, U.S. Patent No. 5,034,819 (hereinafter "Tsukagoshi"), under 35 U.S.C. § 102(b).
2. Whether or not claims 1, 3-5 and 7-8 are anticipated by Toyoshima et al., U.S. Patent No. 5,512,955 (hereinafter "Toyoshima"), under 35 U.S.C. § 102(b).

VII. GROUPING OF CLAIMS

Appealed claims 1, 3-5 and 7-8 all stand or fall together.

VIII. ARGUMENTS

1. Claims 1 And 5 Are Not Anticipated By Tsukagoshi

Claim 1 recites, *inter alia*, "a controller for receiving the channel number output from the key input and storing the channel number output from the key input in the memory while controlling the tuner to tune to a broadcasting channel corresponding to the received channel number, wherein the controller receives a signal output from the signal processor, determines whether a broadcasting signal is present in the currently tuned broadcasting channel and stores the corresponding broadcasting channel number in the memory only if said broadcasting signal is present" (*see also* claim 5).

The Examiner alleges that Tsukagoshi discloses these features by describing that "the channel selecting microcomputer 3 will judge the respective receiving channels by the judging signal from the synchronizing circuit 7 as to whether they are signal channels or no-signal channels and will have the RAM 9 memorize the data showing the channel numbers or the signal channels" (*see* Final Office Action, page 3; *citing* Tsukagoshi: col. 4, lines 3-8).

Appellant respectfully submits that the Examiner is taking this single sentence out of context. When the entire paragraph is examined, Tsukagoshi describes that channels can be stored in a provided memory, and that the channels are stored according to signals provided by an ADD/ERASE key 11 or an AUTO PROGRAM key 12 of an input device 8 (Tsukagoshi: col. 3, line 55 to col. 4, line 8). Thus, Tsukagoshi merely describes storing channels according to either of the two conventional approaches disclosed on page 1 of Appellant's specification.

1 Tsukagoshi fails to disclose or suggest, for example, that when a controller receives a channel number output from the key input and controls a tuner to tune a broadcasting channel corresponding to the received channel number, the controller stores a corresponding broadcasting channel number in the memory only if said broadcasting signal is present (*see* Appellant's claims 1 and 5).

To the contrary, the microcomputer 3 of Tsukagoshi requires more than receiving a channel number output from input apparatus 8 to store memory channels in its RAM 9; for example, an ADD/ERASE key 11 or an AUTO PROGRAM key 12 must be operated as well (Tsukagoshi: col. 3, lines 56-59).

These are the types of key operations that Appellant's invention does away with, thereby simplifying the overall key operations associated with storing a broadcasting channel number in a memory (*see, e.g.*, Appellant's specification, page 4).

For at least these reasons, claims 1 and 5 are not anticipated by Tsukagoshi.

2. Claims 1, 3-5 And 7-8 Are Not Anticipated By Toyoshima

As noted above, claim 1 recites, *inter alia*, "a controller for receiving the channel number output from the key input and storing the channel number output from the key input in the memory while controlling the tuner to tune to a broadcasting channel corresponding to the received channel number, wherein the controller receives a signal output from the signal processor, determines whether a broadcasting signal is present in the currently tuned broadcasting channel and stores the corresponding broadcasting channel number in the memory only if said broadcasting signal is present" (*see also* claim 5).

The Examiner alleges that Toyoshima discloses these features by describing that "if an affirmative result is obtained at [step SP4], CPU 8 proceeds to the succeeding step SP5 and receives the information signal SG from the information signal analyzing circuit" (*see* Final Office Action, page 5; *citing* Toyoshima: col. 3, lines 59-64). Furthermore, the Examiner relies on Toyoshima's description that "at step SP6, the CPU 8 writes the information of the information signal along with the channel number to the memory 9, and then proceeds to the succeeding step SP7" (*Id.*).

Appellant again respectfully submits that the Examiner is taking these sentences out of context. When the entire flow of Fig. 2 of Toyoshima is examined, it is apparent that an auto-programming sequence is illustrated. For example, channels are evaluated sequentially starting at an initial starting channel SP2, which is channel 2 in the case of an air transmission broadcasting wave SRF1, until a maximum channel value SP8, which is channel 83 in the case of an air transmission broadcasting wave SRF1, is reached. Each channel within this range is

evaluated sequentially to determine whether it is an active channel at SP4, and only information on active channels, including the channel number, are written in memory 9 at SP6 (Toyoshima: col. 3, lines 46-67; and Fig. 2). Thus, Toyoshima merely describes storing channels according to an auto-programming function in response to an initiating signal at SP1 (Toyoshima: Abstract; and Fig. 2).

Toyoshima fails to disclose or suggest, for example, that when a controller receives a channel number output from the key input and controls a tuner to tune a broadcasting channel corresponding to the received channel number, the controller stores a corresponding broadcasting channel number in the memory only if said broadcasting signal is present (*see* Appellant's claims 1 and 5).

To the contrary, the CPU 8 of 3 of Toyoshima requires more than receiving a channel number, *e.g.*, at receiving unit 7, to store the channel in memory (RAM) 9; for example, an initiating signal must be provided and an auto-programming sequence (involving multiple channels) must be conducted as well (Toyoshima: Abstract; col. 3, line 43 to col. 4, line 40; and Figs. 2-3). Indeed, Toyoshima describes storing channels in a manner similar to the second conventional approach discussed on page 1 of Appellant's specification.

These are the types of operations that Appellant's invention does away with, thereby simplifying the overall operations associated with storing a broadcasting channel number in a memory (*see, e.g.*, Appellant's specification: page 4). Furthermore, a user is not required to wait for the programming (*e.g.*, tuning, evaluating and storing) of a long sequence of channel numbers, since Appellant's invention stores a channel in memory as it is selected by a user (*i.e.*,

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on a channel-by-channel basis), when the selected channel corresponds to an active broadcasting signal.

In view of the above, claims 1 and 5 are not anticipated by Toyoshima. Consequently, claims 3-4 and 7-8 are not anticipated by Toyoshima, at least by virtue of their dependency.

IX. CONCLUSION

In conclusion, Appellant respectfully requests the members of the Board to reverse the rejections of the appealed claims and to find each of the claims allowable as defining subject matter which is not anticipated by either Tsukagoshi or Toyoshima, under 35 U.S.C. § 102(b).

The present Brief on Appeal is being filed in triplicate. Unless a check is submitted herewith for the fee required under 37 C.F.R. §1.192(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: February 11, 2004

APPENDIX

CLAIMS 1, 3-5 AND 7-8 ON APPEAL:

1. A channel memory device in a broadcasting signal processor, comprising:
 - a key input for inputting a channel number according to a user's selection;
 - a tuner for tuning to a channel corresponding to the channel number selected by the key input, among received broadcasting signals;
 - a signal processor for processing a composite video signal of said channel tuned and output from the tuner;
 - a memory for storing the channel number; and
 - a controller for receiving the channel number output from the key input and storing the channel number output from the key input in the memory while controlling the tuner to tune to a broadcasting channel corresponding to the received channel number,wherein the controller receives a signal output from the signal processor, determines whether a broadcasting signal is present in the currently tuned broadcasting channel and stores the corresponding broadcasting channel number in the memory only if said broadcasting signal is present.

3. The channel memory device according to claim 1, further comprising:
 - a character signal generator for generating a character signal for indicating the memorization of the channel number selected by the key input;
 - a mixer for mixing a signal output from the signal processor with a signal output from the character signal generator; and
 - a display for displaying a signal output from the mixer.

4. The channel memory device according to claim 3, wherein the controller controls the character signal generator to generate a current broadcasting channel number and a character signal indicating the memorization of the channel number, so that said user can easily identify the memorized broadcasting channel.

5. A channel memory device in a broadcasting signal processor, comprising:

- a key input for inputting a channel number according to a user's selection;
- a tuner for tuning to a channel corresponding to the channel number selected by the key input, among received broadcasting signals;
- a signal processor for processing a composite video signal of said channel tuned and output from the tuner;
- a memory for storing the channel number; and
- a controller for receiving the channel number output from the key input and automatically storing the channel number output from the key input in the memory while controlling the tuner to tune to a broadcasting channel corresponding to the received channel number,

wherein the controller receives a signal output from the signal processor, determines whether a broadcasting signal is present in the currently tuned broadcasting channel and stores the corresponding broadcasting channel number in the memory only if said broadcasting signal is present.

7. The channel memory device according to claim 5, further comprising:

a character signal generator for generating a character signal for indicating the memorization of the channel number selected by the key input;

a mixer for mixing a signal output from the signal processor with a signal output from the character signal generator; and

a display for displaying a signal output from the mixer.

8. The channel memory device according to claim 7, wherein the controller controls the character signal generator to generate a current broadcasting channel number and a character signal indicating the memorization of the channel number, so that said user can easily identify the memorized broadcasting channel.